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Priority: Normal
Topic: Supplemental Comments on Po
Sent: 04-18-97
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Mail*Link»

Supplemental Comments on Pollutant Issues in

>Date: Thu, 17 Apr 1997 12:36:08 -0700 (PDT)
>From: Chris Foe <chrisf@bptcp1.swrcb.ca.gov>
>Subject: Supplemental Comments on Pollutant Issues in CALFED Ecosystem Restoration Progra (fwd)
>To: cdarling@water.ca.gov, rwoodard@water.ca.gov
>X-MIME-Autoconverted: from QUOTED-PRINTABLE to 8bit by goldeneye.water.ca.gov id MAA29460
>
>Rick, Cindy FYI Chris
>
>---------- Forwarded message ----------
>Date: Tue, 15 Apr 1997 21:27:23 -0400 (EDT)
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>Subject: Supplemental Comments on Pollutant Issues in CALFED Ecosystem Restoration Progra
>
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>
>
>April 15, 1997
>
>Christopher Foe
>CA Regional Water Qual Ctrl Board
>Central Valley Region
>3443 Routier Road
>Sacramento, CA 95827-3098
>
>Dear Chris:

_Following up on my e-mail of yesterday in which I addressed a number of

A-15

the
>C. Darling - CALFED questions about properly incorporating pollutants into
>the CALFED Delta water quality management and ecosystem restoration
programs,
I wish to elaborate on one of the key issues that I raised--namely,
CALFED's
>defining the real water quality use impairments of Delta waters and Delta
>resources. In my comments of yesterday as well as in the comments of
several
>others who responded to your request for comments, the commentors have
>discussed the inappropriateness of assuming that the elevated
concentrations
>of a regulated constituent represents a real water quality problem for
which
>CALFED should immediately implement a control program. The CALFED approach
>has been one of failing to define the real water quality use impairments
that
>are occurring in the Delta due to chemical constituent inputs.
>
>_As others and I have discussed, an elevated concentration of a regulated
>constituent should be considered a potential problem that should be
>investigated through CALFED support to determine whether there is a real
>water quality use impairment associated with the elevated concentration or
>whether the exceedance of a water quality standard in Delta waters or
>tributary waters represents an administrative exceedance related to how the
>US EPA criteria are being implemented into state standards as regulatory
>limits.
>
>_I believe there is general agreement that CALFED should focus its
esources
on defining the real water quality use impairments that are occurring
within
>the Delta to in-Delta and downstream users. Also, CALFED should focus its
>resources on defining the upstream (Delta watershed) use impairments that
are
>important to Delta resources. The issue I wish to address now is that of
how
>CALFED should proceed to define real water quality use impairments that
>should be addressed as part of formulating technically valid,
cost-effective
>water quality and ecosystem management programs.
>
>_As part of formulating the Evaluation Monitoring approach, I have provided
>extensive discussions on how technical stakeholders in a particular
>waterbody's watershed should determine the real significant water quality
use
>impairments that are occurring associated with a particular waterbody.
These
>are discussed in the various papers and reports that I have developed in
>support of the evaluation monitoring approach. The first step in that
>approach is to define the water quality use impairments that are occurring.
> A use impairment is understood to mean the impairment of any beneficial
use
>of a waterbody that is of interest to the public who must ultimately pay
or
the control programs that are needed to protect the use. These uses range

>from impairment of aquatic resources through toxicity through aesthetic
>enjoyment of a waterbody and include dissolved oxygen depletion, domestic
>water supply water quality, excessive fertilization/eutrophication,
excessive
>bioaccumulation of hazardous chemicals, sanitary quality for contact
>recreation and shellfish harvesting, sediment accumulation, litter
>accumulation, oil and grease accumulation, sediment toxicity that impairs
>beneficial uses, etc.
>
> Basically from an aquatic life-ecosystem perspective, a water quality
>problem due to chemical constituents or pathogenic organisms is one that
>impairs the numbers, types and characteristics of desirable forms of
aquatic
>life in a waterbody. The goal of the CALFED water quality management
program
>should be to control the inputs of chemical constituents and pathogenic
>organisms that have been shown to have a high probability of being adverse
to
>human health, aquatic life and wildlife. For aquatic life and wildlife,
this
>goal should be manifested in developing sufficient knowledge of the
potential
>impacts of chemical constituents that could impair the numbers, types and
>characteristics of desirable forms of aquatic life. The issue that must be
>addressed for existing discharges is whether the aquatic and other
ecosystem
>resources of the Delta are degraded by chemical constituent inputs to the
>Delta or its tributaries compared to the resources that could be present
>based on habitat characteristics. There is no question that altered
habitats
>have drastically changed Delta aquatic resources. The issue that is not
>adequately defined is what role have chemical constituents played in
>adversely impacting Delta aquatic resources. This is the issue that must
be
>addressed first before any management programs are implemented by CALFED.
>
> As I have discussed in my various papers and reports, the problem
definition
>phase of Evaluation Monitoring does not address chemical constituents that
>could be toxic, but instead focuses on assessing whether toxicity exists in
>the waterbody of concern that is of sufficient magnitude, duration and
areal
>extent to be potentially adverse to the aquatic life-related beneficial
uses
>of the waterbody. Evaluation Monitoring problem definition is not based on
a
>body count of dead organisms or people. It makes use of what is known
today
>in a properly formulated risk assessment context to assess, using best
>professional judgement, whether a real use impairment is likely occurring.
> This assessment is made by technical stakeholders who then recommend to
the
>public and their representatives the issues that need to be addressed in
>order to restore ("fix") the Delta. The problems then are prioritized
through the social-legal-political process and technically valid,
>cost-effective control programs are formulated to the extent the financial

>resources permit.
>
>_The current CALFED water quality management program has jumped all the way
>to control programs without doing the necessary background work to define
>real water quality use impairments, especially as they relate to ecosystem
>issues. Such an approach is extremely dangerous and almost certainly will
>result in massive waste of public funds in implementing control programs
that
>have limited effectiveness in addressing real issues of significance to the
>public.
>
>_I want to stress that this Evaluation Monitoring approach is not an
academic
>approach formulated by a group of university scientists and engineers who
>want to ensure that they are going to have a continuous source of research
>funds to support their graduate students and themselves. It is a highly
>practical, common-sense approach that focuses on finding real water quality
>problems - initially, easily recognizable use impairments, defining their
>magnitude, significance and cause and controlling them to the extent the
>financial resources will allow. I have developed over 100 pages of reports
>that provide guidance on how to define real water quality problems in each
of
>the areas of concern as well as some of the issues the must be considered
in
>problem definition, evaluation and management to use financial resources
>wisely on behalf of the public's interest. For example, rather than
>measuring mercury inputs to the Delta and taking a shot-gun approach to try
>to control these inputs, the focus should be on first determining whether
>there is excessive mercury within edible aquatic life tissue within the
>Delta. If this is a mercury problem, then determine the specific forms of
>mercury that are added to the Delta that are responsible for the
development
>of methyl mercury in Delta aquatic life tissue. Once these are known, then
>determine the specific sources for those forms. As you know, the mercury
>focus group that you have organized has some ideas about these issues.
> CALFED should fund specific projects to evaluate the reliability of these
>ideas.
>
>_Similar approaches should be used for each of the other water quality use
>impairments that are occurring related to chemical constituent input, such
as
>excessive nutrients (nitrogen and phosphorus compounds). While there is a
>well known excessive fertilization problem associated with domestic water
>supplies that use Delta waters, it also appears that there is excessive
>fertilization of Delta waters which is manifested in sufficient growth of
>aquatic plants to interfere with recreational uses. This is a real use
>impairment that needs to be considered by CALFED. If review of this matter
>shows that there is a water quality problem due to excessive fertilization
>within the Delta, then attention should be given to the relative role of
>nitrogen vs. phosphorus in controlling the excessive plant biomass and the
>source of the nutrient(s) responsible for this excessive growth. Then
>control programs can be formulated by CALFED to address in-Delta
>eutrophication problems.
>
>_I hope these supplemental comments are of value. If you or others have
questions or comments on them, please contact me.

>
>_____Sincerely,
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>
>_____G. Fred Lee, PhD, DEE
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>GFL:oh
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>
>

Fred

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